Claims:

1. A process for producing 2-bromocyclopentanone, which comprises reacting cyclopentanone with bromine in a biphasic mixture of (i) water and (ii) an organic solvent or mixtures thereof.

2. A process according to claim 1, wherein the organic solvent is a water immiscible organic solvent having no carbonyl group.

3. A process according to claim 1, wherein the organic solvent is halogenated hydrocarbon, hydrocarbon or mixtures of halogenated hydrocarbon and hydrocarbon.

4. A process according to claim 1, wherein the organic solvent is halogenated hydrocarbon.

5. A process according to claim 3 or 4, wherein the halogenated hydrocarbon is 1-chlorobutane.

6. A process according to anyone of the claims 1 to 5, wherein the molar ratio of cyclopentanone to bromine is 10:1 to 1:1.

7. A process according to anyone of the claims 1 to 5, wherein the molar ratio of cyclopentanone to bromine is 5:1 to 2:1.

8. A process according to claim 1, which further comprises the step of reacting 2-bromocyclopentanone with a base to produce 2-cyclopentene-1-one.